Title: METHODS TO TREAT UNDESIRABLE IMMUNE RESPONSES

In the Claims

- 1. (Currently Amended) A method of preventing or inhibiting a pathological condition associated with aberrant, pathogenic or undesirable antibody production which is specific for a particular endogenous antigen that is normally expressed in a human, comprising: administering to the respiratory tract of a human afflicted with, or at risk of, the pathological condition a dosage form comprising an amount of at least one epitope peptide, wherein the administration of the dosage form is effective to reduce or inhibit the aberrant, pathogenic or undesirable antibody production in humans having divergent HLA haplotypes, wherein the sequence of the epitope peptide comprises a universal, immunodominant epitope, and wherein the peptide comprises less than the sequence of the endogenous antigen, wherein the endogenous antigen is an acetylcholine receptor, factor VIII or factor IX.
- 2. (Canceled)
- 3. (Original) The method of claim 1 wherein the administration is effective to reduce or inhibit the amount of said antibody for an antigen comprising said peptide.
- 4. (Canceled)
- 5. (Currently Amended) The method of claim 1 wherein the endogenous antigen is the acetylcholine receptor, insulin, growth hormone, factor VIII or factor IX.
- 6-16. (Canceled)
- 17. (Currently Amended) A method to tolerize a human to an endogenous antigen associated with aberrant, pathogenic or undesirable antibody production in the human, comprising: administering to the respiratory tract of the human at least one epitope peptide, having a universal immunodominant epitope sequence, wherein the administration is effective to

Title: METHODS TO TREAT UNDESIRABLE IMMUNE RESPONSES

tolerize CD4⁺ cells which are associated with antibody production to the endogenous antigen, in humans having divergent HLA haplotypes and wherein the peptide comprises less than the sequence of the antigen, wherein the endogenous antigen is an acetylcholine receptor, factor VIII or factor IX.

- 18. (Original) The method of claim 17 wherein the peptide is nasally administered.
- 19-30. (Canceled)
- 31. (Currently Amended) The method of claim 1, 2, or 17 wherein the administration does not increase synthesis of pathogenic antibody to the native antigen.
- 32-33. (Canceled)
- 34. (Currently Amended) The method of claim 1 or 2 wherein the administration is effective to reduce or inhibit the affinity of the antibody for an antigen comprising said peptide.
- 35. (Canceled)
- 36. (Currently Amended) The method of claim 35 34 wherein the endogenous antigen is the acetylcholine receptor, insulin, growth hormone, factor VIII or factor IX.
- 37-38. (Canceled)
- 39. (Currently Amended) The method of claim 1, 2 or 17 further comprising administering an agent that inhibits B cell activation.
- 40. (Canceled)

Title: METHODS TO TREAT UNDESIRABLE IMMUNE RESPONSES

- 41. (Currently Amended) The method of claim 17 wherein the endogenous antigen is the acetylcholine receptor, insulin, growth hormone, factor VIII or factor IX.
- 42. (Previously Presented) A method of preventing or inhibiting a pathological condition associated with aberrant, pathogenic or undesirable antibody production which is specific for a particular endogenous antigen that is normally expressed in a human, comprising: administering to the respiratory tract of a human afflicted with, or at risk of, the pathological condition a dosage form comprising an amount of at least one epitope peptide, wherein the administration of the dosage form is effective to reduce or inhibit the aberrant, pathogenic or undesirable antibody production in humans having divergent HLA haplotypes, wherein the sequence of the epitope peptide comprises a universal, immunodominant epitope, and wherein the peptide comprises less than the sequence of the endogenous antigen, wherein the peptide includes residues 150-169, 181-200 or 360-378 of the *Torpedo californica* acetylcholine receptor alpha subunit or a portion of those residues or corresponding residues in human acetylcholine receptor.

43. (Canceled)

44. (Previously Presented) A method of preventing or inhibiting a pathological condition associated with aberrant, pathogenic or undesirable antibody production which is specific for a particular endogenous antigen that is normally expressed in a human, comprising: administering to the respiratory tract of a human afflicted with, or at risk of, the pathological condition a dosage form comprising an amount of at least one epitope peptide, wherein the administration of the dosage form is effective to reduce or inhibit the aberrant, pathogenic or undesirable antibody production in humans having divergent HLA haplotypes, wherein the sequence of the epitope peptide comprises a universal, immunodominant epitope, and wherein the peptide comprises less than the sequence of the endogenous antigen, wherein the antigen is factor VIII.

Serial Number: 08/991143 Filing Date: December 16, 1997

Title: METHODS TO TREAT UNDESIRABLE IMMUNE RESPONSES

- 45. (New) The method of claim 42 wherein the administration is effective to reduce or inhibit the amount of said antibody for an antigen comprising said peptide.
- 46. (New) The method of claim 42 wherein the administration does not increase synthesis of pathogenic antibody to the native antigen.
- 47. (New) The method of claim 42 wherein the administration is effective to reduce or inhibit the affinity of the antibody for an antigen comprising said peptide.
- 48. (New) The method of claim 5, 36, 41 or 44 wherein the epitope peptide includes sequences from A2, A3 or C2 of factor VIII.